IMS, Web 2.0 and blended services

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Solutions, Strategy & Marketing

Cagliari, June 08

1 Customer Challenges and User Oriented Approach to Internet Communications

Key Challenges for Service Providers in Dealing with the Latest Communication Trends

- End users want personalized, controlled and interactive communications via text, voice and video anywhere at anytime
- Personalized data needs to follow the user (profiles, contacts, ...)
- Redirect traffic from the social networking sites to the Service Provider network
- Need to offer the same applications/services across multiple access and screens (PC, mobile devices, etc.)
- It needs to be user friendly

Need to provide personalized text, data, voice, and video anywhere, any time

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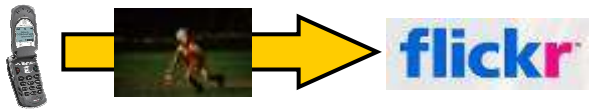
Addressing the Challenges: Building a User Oriented Approach

- To adapt to the new communication trends, carriers need to adopt a user oriented approach, creating a greater degree of "personal connectedness"
- Develop the capability to support a flexible profile for Personal Information Management (PIM) data and a user centric event management system
  - Allow users to extend their existing address book to connect to other services

    Examples: Google talk YAHOO! LinkedIn
  - Use PIM data as an asset to start building subscriber profile data
- Develop the capability to augment the existing social networking sites
  - Need to provide "connectedness" to the world through open interfaces
  - Facilitate moving media (photos, video) captured on the user devices to the social networking sites

  - Mobile device will be the fore-front to accessing the social networking sites
- Implement widgets and plug-ins to provide seamless communication regardless of access or device

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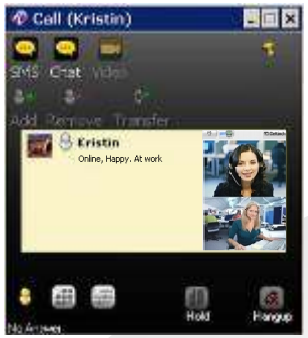
2 Internet Communications - Use Case Examples

New Communications Trends: Beyond Classic Telephony Towards Seamless Internet Communications for Both Consumer and Enterprise Markets

Video Call



Widget Mash-up

Video Share

Social Networking & Web 2.0 Services

Browser Plug-in

MultiMedia Services with Voice

Conversational Services

Messaging Services

MultiMedia Messaging

Presence enabled address book with VoIP

Visual VoiceMail

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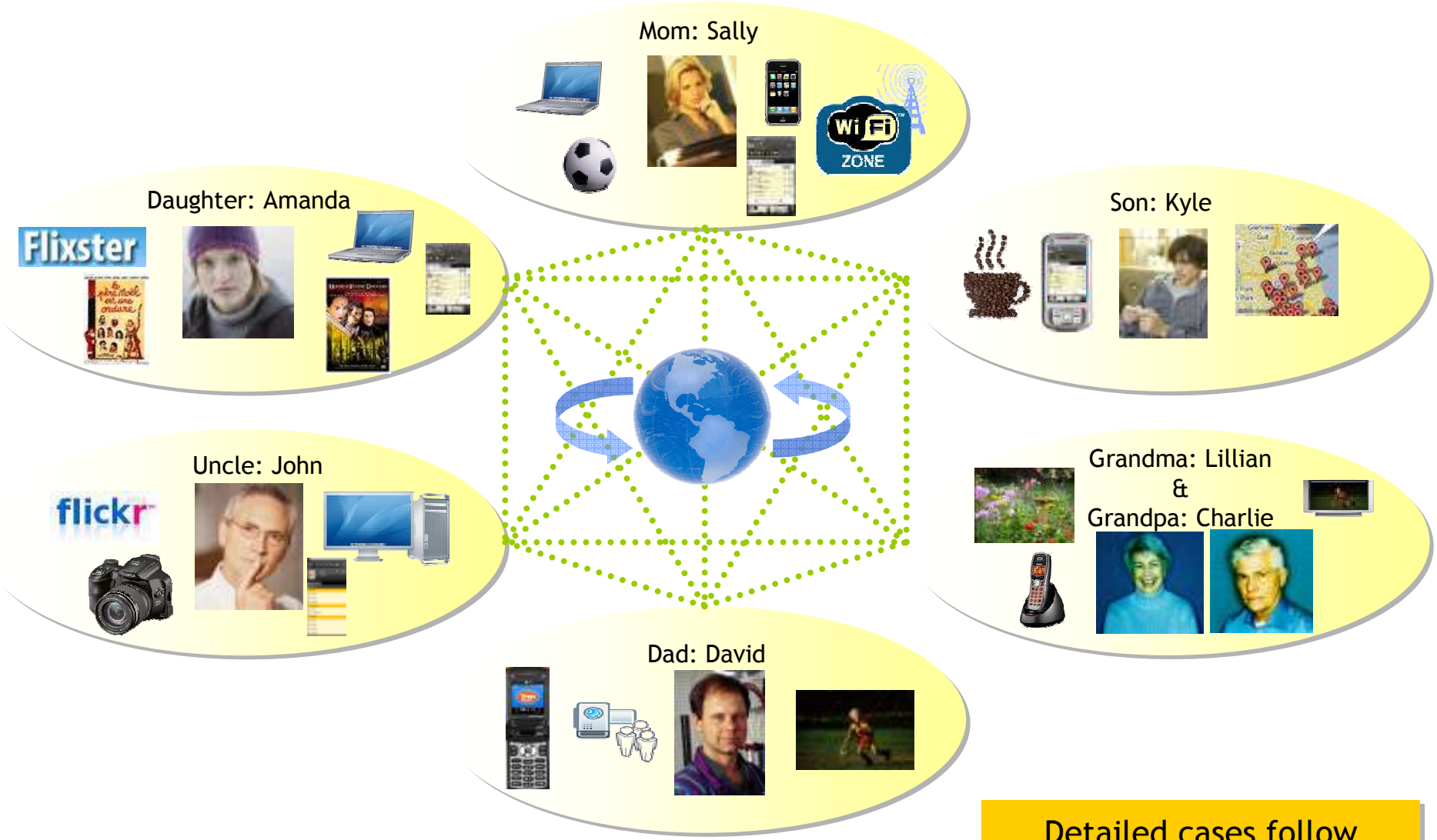
A Day of Life in Communications



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Use Case Example – Blending with Social Applications

Amanda, a College Student, Loves Foreign Films and Her Friends Opinions

- Amanda would like to rent a foreign film to watch with her boyfriend later tonight, and would like the opinions of her friends (also friends of friends) on which movie to view.
- By right-clicking on her friends in her PC Client address book, she is able to see each friend's top 3 favorite movies based on movie ratings published by her friends on Flixster.com.
- If she likes the review, she can click to download the movie directly to her computer from the online movie rental site.
- She can also push the movie trailer to her boyfriend using multimedia IM for him to preview.
- After watching the movie, she can publish her review and push it to her contacts in her address book.

View ratings

Upload reviews

Key Components:

- PC Client
- Multimedia Instant Messenger (MIM)
- Network Address Book (NAB)
- OpenSocial API

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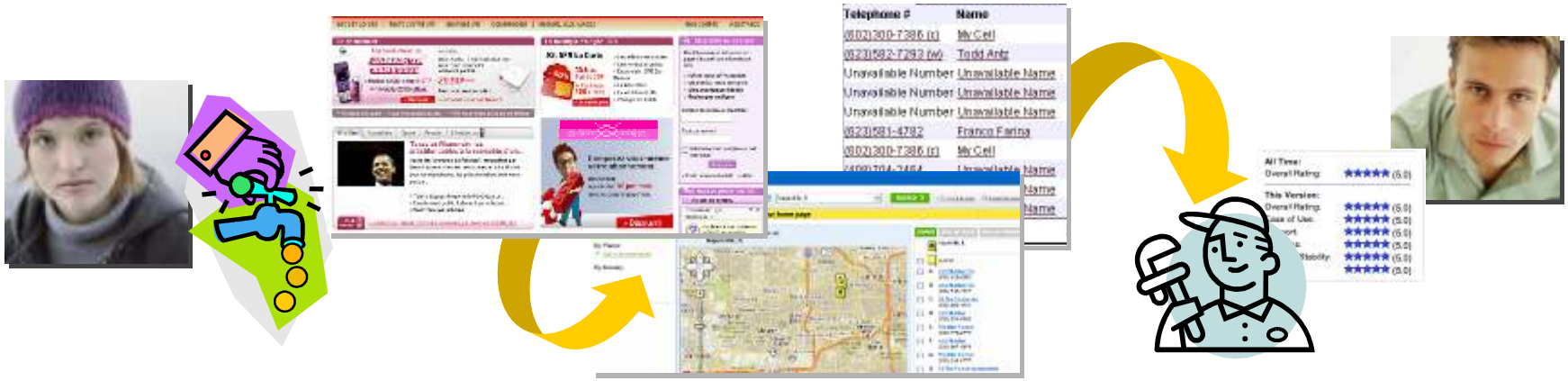
Use Case Example – Social Networking Search

Amanda Also Wants Her Friends and Families' Opinion On …

- Amanda is looking for a plumber to fix her broken faucet. On her Service Provider's web portal, she can simultaneously search both the Yellow Pages and the network based call logs of her contacts who "open up" their call logs to their friends and family.
- The search result from the call logs show that David, her boyfriend, has contacted a plumber 3 weeks ago with a 5-star recommendation. Amanda also receives a "classic result" from the Yellow pages with listed plumbers close to her apartment.
- With the mash-up of Google Maps on her web portal, she can easily find out if the plumber is located near her house. If she decides to contact the plumber, she can click-to-call on the phone number of the search result.



Key Components:

- NAB
- Personal Communication Manager (PCM)
- Converged Telephony Server (CTS)

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Use Case Example – Managing Social Networking Contacts Easily

Amanda Also Loves to Keep In Touch with Her Friends and Family

- There are so many social networking sites out there. Amanda's friends and family constant updating the information there – uploading pictures, publish blogs, recommend movies, providing feedbacks, etc.
- With her PC client, mobile client and Web 2.0 widget, Amanda can manage getting all the information in one stop.
- On the clients, she is kept informed with each contact's most recent activity on their social networking site.
- She can also organize social networking sites into her clients' interfaces for easy access.

Key Components:

- PC Client
- MIM
- NAB
- OpenSocial API

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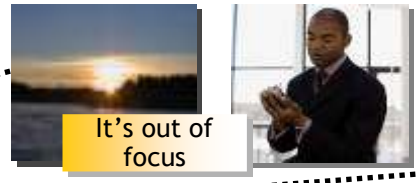
Use Case Example – Blending with Social Applications

Uncle John, a Math Professor, Takes on Photography as a New Hobby

- John is eager to improve upon his photography skills. He is an avid photographer who uploads his images to the online photo hosting site, flickr.com so he can get feedbacks from his photography club.
- He uploaded the photos from a recent trip to flickr.com. With the embedded Web 2.0 communication widget, he sets up a group chat with his online buddies using multimedia IM and sends out a few “bad” photos to get instant feedback from them.
- From the widget, John also has the ability to make multiparty conference calls with his online buddies if needed.



It’s out of focus

Needs more contrast

Too much sky!

Key Components:

- Web 2.0 Widget
- NAB
- Presence Server (PS)
- CTS / PCM
- MIM

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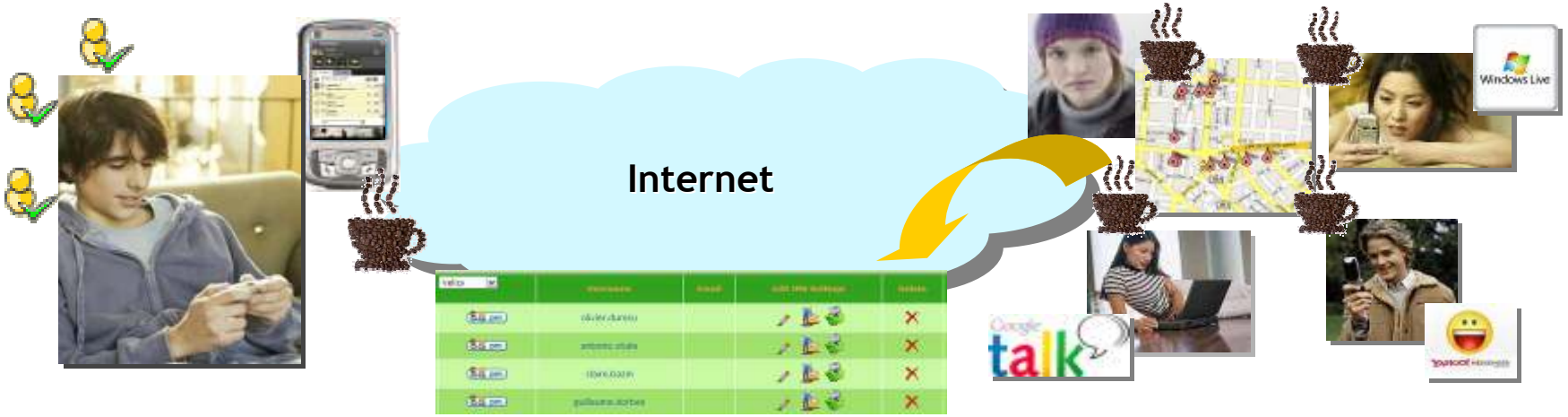
Use Case Example – Multi-Communities IM and Address Book Import

Kyle, a Teenager, Loves to Socialize with His Friends

- Kyle would like to meet his friends at a local coffee shop. He has previously imported all his buddy lists from Google Talk, Windows Live and Yahoo Messenger on to his network address book provided by his mobile operator.
- Using his mobile client, he checks the availability and location of his buddies from one address book. His sister, Amanda is also available on the same mobile network.
- Kyle is able to communicate with them via multimedia IM and share a map with directions to the coffee shop. He is also able to place voice call with them.
- This time, Kyle sends a group IM to his nearest friends to meet for a cup of coffee.



Key Components:

- Windows Mobile client
- MIM
- PS & NAB
- XMPP gateway interworking, IM gateway (3rd party)
- CTS / PCM

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Use Case Example – Synchronized Buddy List
Kyle Runs into Couple Childhood Friends …

- On the way to meeting with his friends in the coffee shop, Kyle runs into couple friends, Heidi and Michelle, who he lost contact with for few years. Heidi and Michelle are international exchange students at University at Honolulu in Hawaii and they are back home for a short break.
- Due to their individual prior engagements, they cannot catch up with each other. They exchange their vCard (contact information) via Bluetooth on their mobiles and promise to get in touch with each other soon.
- Later that night, Kyle comes home and turns on his laptop. He is able to see both Heidi and Michelle are “available” for group chat on his PC client and his Web 2.0 Widget client on **iGoogle** and **Netvibes** without re-entering their contact information into each address book. The contact information is automatically synchronized between all his address books.

Key Components:
- Web 2.0 Widget Client
- PC Client
- Windows Mobile Client
- PS & NAB

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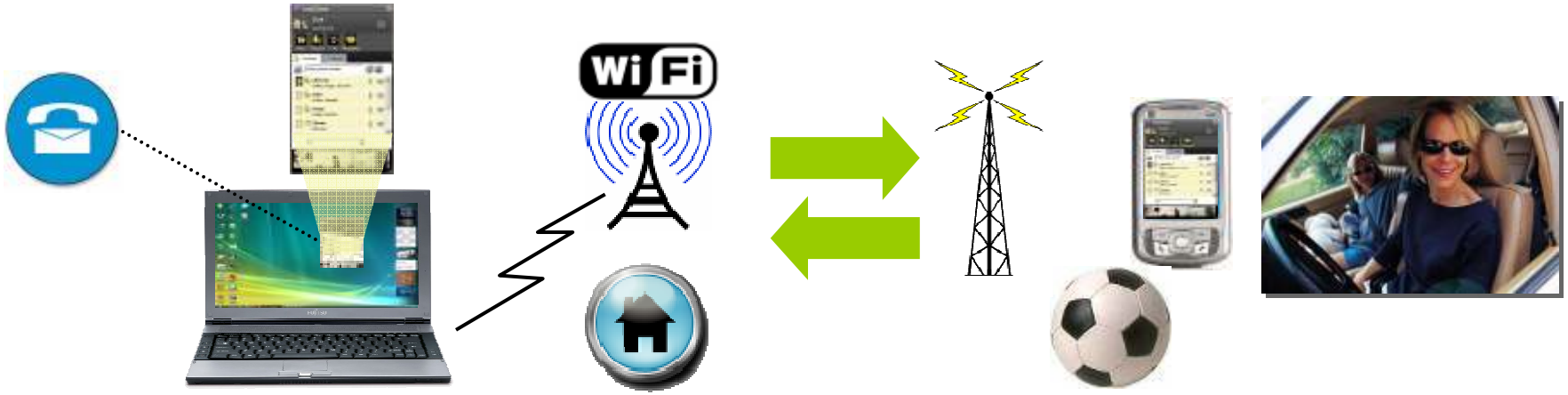
Use Case Example – VoIP and Call Continuity

Sally, a Mother, Works from Home and Needs Seamless Communication

- Sally is on a conference call with her clients and suppliers using her PC Client on her laptop.
- To minimize interruptions during the call, she pre-determines which calls to accept or re-direct to voice mail. She can then retrieve the voice mail on her laptop during the conference call.
- During the call, she needs to drop off her child at soccer practice. She parks the call from the PC Client, and then retrieves it on her dual-mode mobile client while in her home WiFi network.
- Once she leaves the house, she can continue the call on her mobile network.



Key Components:

- CTS / PCM / VCCS (Voice Call Continuity Service)
- PC Client
- Windows Mobile Client
- Converged Messaging System (CMS)

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Use Case Example – Extension Dialing

Sally has Both Business and Consumer Personalities on One Telephone

- Sally is on her way to dropping off her child at soccer practice. She is using her mobile phone to make a call to her boss. Sally's mobile phone is enabled with Circuit Mobile Extension, which allows her to make and receive calls using her office number (4 or 5-digit dialing).
- While she is on calls during business hours, she allows the network to publish her presence to be "unavailable for calls". Her colleagues can decide the best way to reach her based on her presence.
- She also needs to make a personal call during her lunch hour to a retired friend who lives in Jamaica. Mobile Extension allows her the option of placing a call from her mobile phone using her personal mobile number. The call will then be billed to her personal account.

Key Components:

- CTS
- PCM
- PS
- Circuit Mobile Extension

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Use Case Example – X-Portal Application

John, a Math Professor, Needs to Speak with Parents of Student

- John has a student who is struggling in math class and he needs to discuss the student's grade with the parents. The only time he can contact them is in the evening, so he needs to do this from home. The X-Portal enabled page is display after he successfully logs in.
- He brings up the student's grades on the school widget. The IMS widget buddy list is updated with student contacts (e.g., parents, emergency contacts, teachers, …)
- John clicks on the Parents entry and chooses to call them via the widget client.

Services
Call (VoIP)
Instant Messaging
Send e-mail
Transfer files
Appointment Alert*

Parents House

Key Components:

- Web 2.0 Widget
- NAB
- PS
- CTS / PCM
- MIM

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Use Case Example – Click-to-Dial and Any Dial
Sally, Works from Home and Needs Enhanced Telephony Features

- Sally is on a conference call with her clients and suppliers using her 5440 PC Client on her laptop.
- After her call, she checks her call history on her Service Provider web portal to see if she had missed any calls. She sees that her brother John had called. By simply clicking on the missed call number (click-to-dial), she can automatically dial him back from the call history. John reminds Sally that tomorrow is their mother's birthday and that she needs to order flowers from the both of them.
- Sally visits 1-800-Flowers.com in order to send Mom flowers. Using the PCM AnyDial plug-in feature on her browser, she can click on the telephone number listed on the website and the call is automatically placed via the client.

Key Components:
- PC Client
- CTS
- PCM

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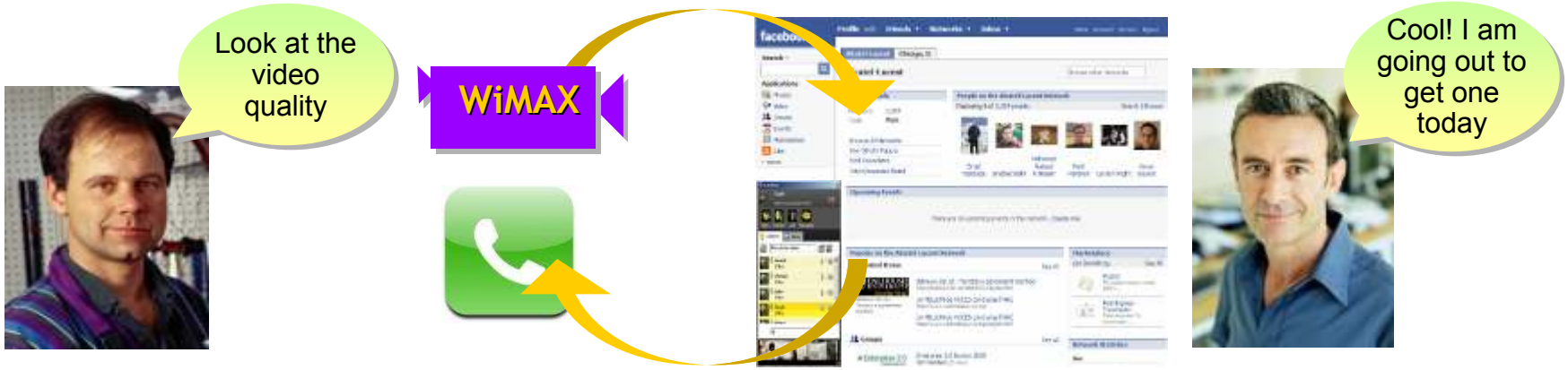
Use Case Example – Sharing Video with Social Networking Users

David, Can't Wait to Show Off His New Toy, WiMax Video Camcorder …

- David just bought a WiMAX video camcorder with a video share and voice calling capability. He wants to show off his new toy to his friend, Troy, who does not own a video share capable device.
- David calls Troy from his mobile's address book and he wants Troy to find a way to watch the live video streaming from his WiMAX camcorder.
- Lucky for Troy, he is a Facebook user. He has Web 2.0 Widget on his Facebook page. He placed a VoIP call back to David from the Web 2.0 Widget to let David know he is ready to watch the video share streaming.
- David starts the video session with Troy and they also continue on the VoIP call to discuss the quality of the video streaming. At this time, David has also published "Do Not Disturb" presence information so all incoming calls are redirected to voice mail for later retrieval.



Key Components:

- Web 2.0 Widget
- PTx (Push-To-X)
- Media Server
- CTS, PCM
- IMS Core: ISC, HSS

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Use Case Example – Video Share and Blogging
David, a Father, Bringing His Family Closer Together

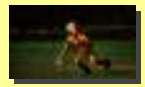
- David is at his youngest son's soccer game. His family members could not attend to watch the game. He starts videotaping the game on his WiMAX video camera.
- Mom receives the video via her mobile phone. Grandma is notified & begins watching live via IPTV.
- Mom, Grandma, and Dad can discuss the game via IP based audio conference.
- When Grandpa comes home, he can watch the recorded game.
- To share the precious moment of her son's life, Mom writes a short blog entry about the soccer game and uploads some short movie clips sent from David to her blog at Blogger.

Blogger

February 14, 2008

"Wow!" Xavier has led his team to the championship. He is the best captain and goal keeper. ☺

Here is the video high lights of the game and let me know what you think.



p.s. David filmed this event on his new coolest WiMax VideoCam.

Key Components:
- PTx
- Media Server
- IMS Core: ISC, HSS
- MIM
- IPTV

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Use Case Example – X-Portal Enterprise Application
David, is also a Business Owner, Wants to Increase Customer Satisfaction

- David owns a hotel chain and wants to make it easy for his guests to get the information that they need when they need it. David has implemented an X-Portal with presence-enabled Web 2.0 Widget embedded on his hotel website.
- Directly from their browser, the guests enter the URL of the hotel. An X-Portal enabled page is displayed.
- The user clicks on Chicago on the map. The Web 2.0 Widget buddy list is updated with the Chicago hotel contacts.
- The user can then click on the front desk buddy on the widget and chooses to make a voice call directly.
- The Chicago hotel front desk agent answers the call and makes the reservation.

Services
- Call (VoIP)
- Instant Messaging
- Send e-mail
- Transfer files

Key Components:
- Web 2.0 Widget
- NAB
- PS
- CTS / PCM
- MIM

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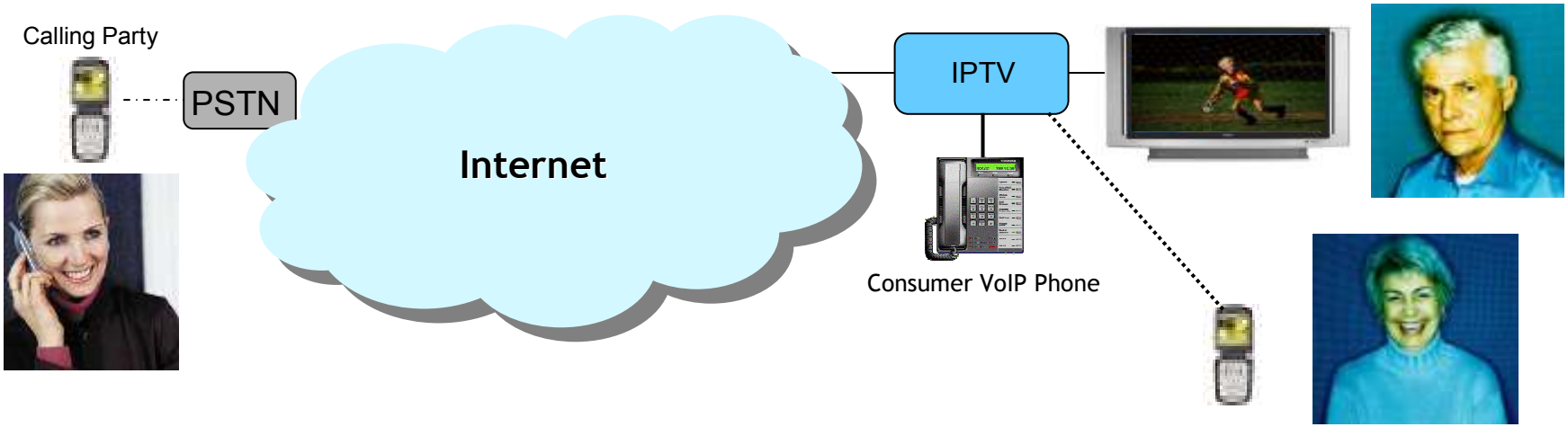
Use Case Example – Call Control via an IPTV Interface
Grandpa Charlie, Enjoys Watching Television

- Grandpa Charlie is relaxing in front of the television watching his Grandson's soccer game that was recorded earlier in the afternoon. While watching the game, the telephone rings.
- Charlie uses the IPTV set and set-top box remote to control the Consumer VoIP services (Caller ID displayed on IPTV and redirect incoming calls to family member's mobile phone or voice mail).
- He recognizes that from the Caller ID that the call is for his wife Lillian. Since she is not home, he redirects the call to her mobile phone and continues to watch the game.



Key Components:
- CTS
- Consumer VoIP
- Service Capability Interaction Manager (SCIM)
- IPTV

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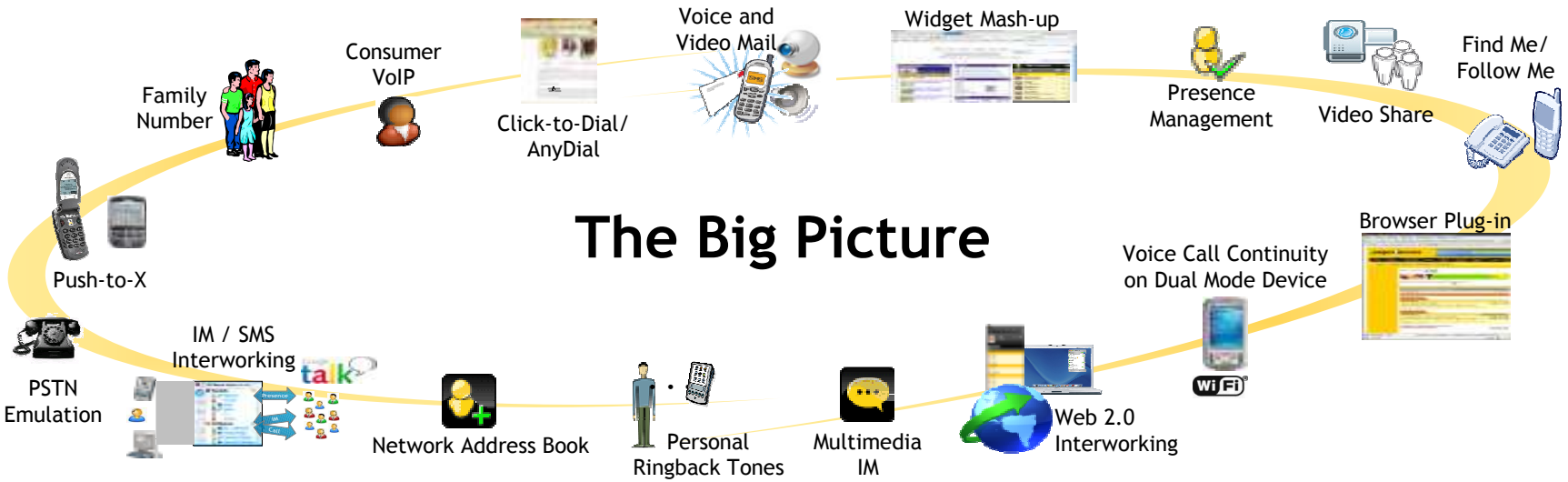
3 Building Use Cases – One Step At A Time

3 Keys to Get to the Big Picture of Consumer Communications

Taking Contacts Online — Your customers want synchronized address books with presence information

Enriching Communications — Your customers want more than just VoIP services

Embracing Open Access — Break down the barriers for services blending and innovations



You need all 3 keys to get to the big picture of consumer communications
but you can start with any one of them now

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How to Implement the Use Case?

Tim, an Advertising Director - Constantly on the Move

- Tim works for an international advertising agency and needs a better way to manage his busy lifestyle.

Taking Contacts Online

- He wants to synchronize his multiple address books (mobile, home phones, PDA, work laptop, home PC, online web sites, paper address book) and share his presence(s) with all of his contacts.

Enriching Communications

- He needs to personalize his communications by accepting or redirecting calls when he is with a client or when he is off work, regardless of the type of device he is using.
- While on the move, his colleagues can send him ad layouts via multimedia IM to request his feedback.
- Tim also uses LinkedIn to find freelance artists. He installs a Web 2.0 widget on his homepage so that regardless of where he is or what device he's on, the artist can contact him right away about the job.

Embracing Open Access

- When urgent request comes in, Tim can use the company's fleet-management software from his laptop to find and contact the closest "free" photographer to get to the job site.
- From his mobile client, PC clients and Web 2.0 widget, Tim also wants to view which LinkedIn users have viewed his profiles.

Implementing Alcatel-Lucent's Internet Communications is as easy as 1-2-3

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An Example for Starting with "Enriching Communications"

Enriching Communications (1)

With CTS, PCM, HSS, Tim gets

- ☑ VoIP with premium services over SIP phones & soft phones
- ☑ to personalize his services instantly

Taking Contacts Online Enriching Communications (2)

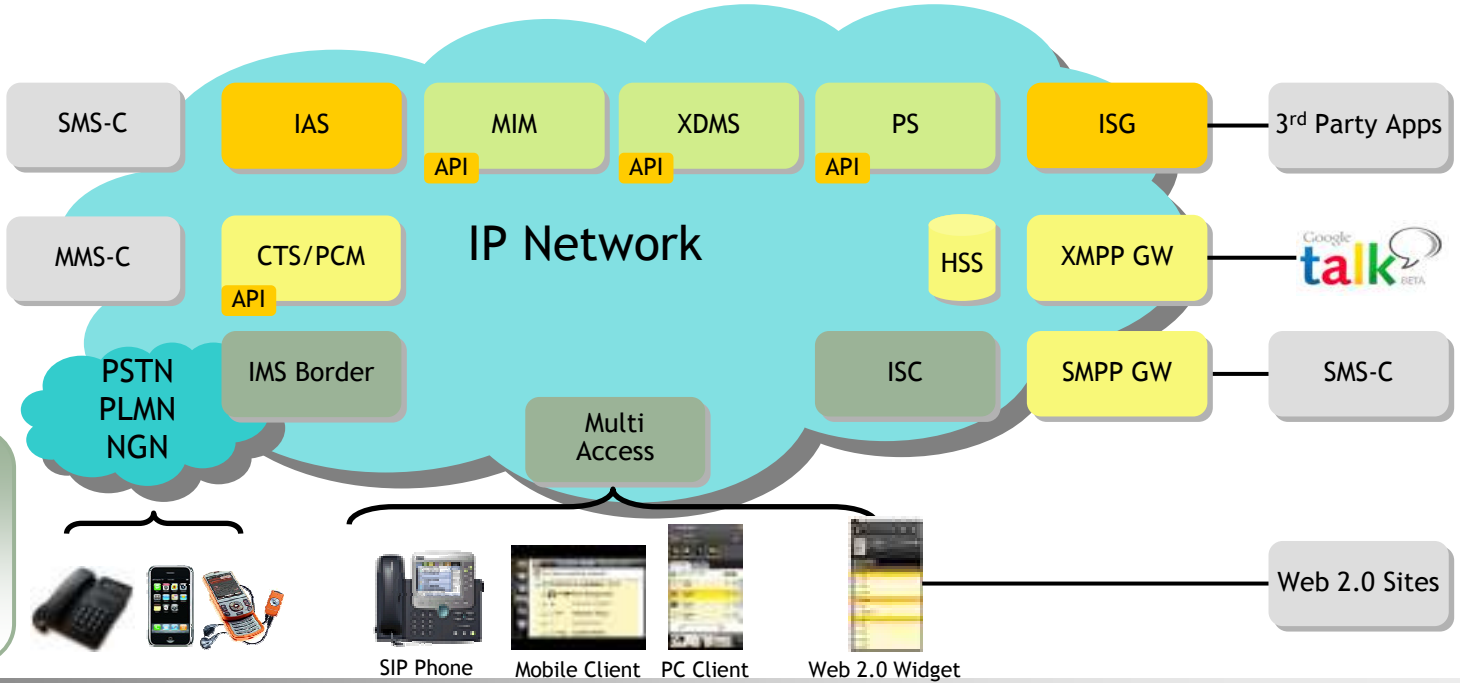
With XDMS, PS, MIM, XMPP GW, SMPP GW, mobile client, PC client and Web 2.0 widget, Tim can

- ☑ store his contacts in one place, synchronize contact information on all devices and see the status of his contacts
- ☑ to have multimedia IM, SMS with his contacts in multiple communities
- ☑ communicate instantly on any devices

Embracing Open Access

With the ISG, IAS and APIs, Tim can

- ☑ be more productive while he uses 3rd party applications such as location-aware Google Maps service
- ☑ stay close with his contacts over Web 2.0 sites using Web 2.0 widget interface similar to the interfaces of PC Client/Mobile Client
- ☑ enjoy more blended services created by service providers or Web 2.0 developers



Notes

- ☑ ISC, IMS Border and Multi Access should be implemented as part of first step
- ☑ IMS Border and Multi Access are customized for different transport networks and access technologies

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An Example for Starting with "Taking Contacts Online"

Taking Contacts Online

With XDMS, PS, mobile client, PC client and Web 2.0 widget, Tim can

- ☑ store his contacts in one place, synchronize the information on all devices and see the status of his contacts
- ☑ communicate instantly on any devices

Enriching Communications

With CTS, PCM, HSS, MIM, XMPP GW, SMPP GW, Tim gets

- ☑ VoIP with premium services over SIP phones & soft phones
- ☑ to personalize his services instantly
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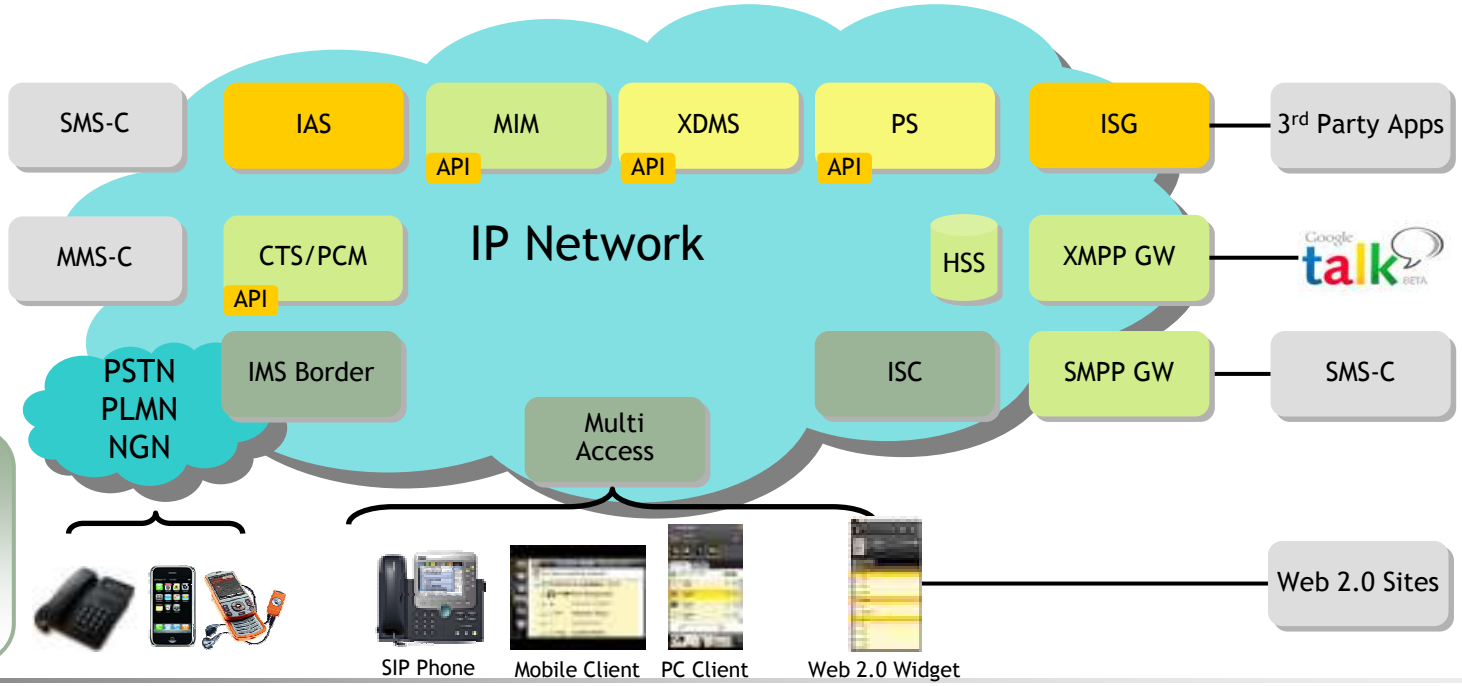

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An Example for Starting with "Embracing Open Access"

Embracing Open Access (1)

With the ISG, Tim can

- ☑ be more productive while he uses 3rd party applications such as location-aware Google Maps service

Taking Contacts Online Enriching Communications

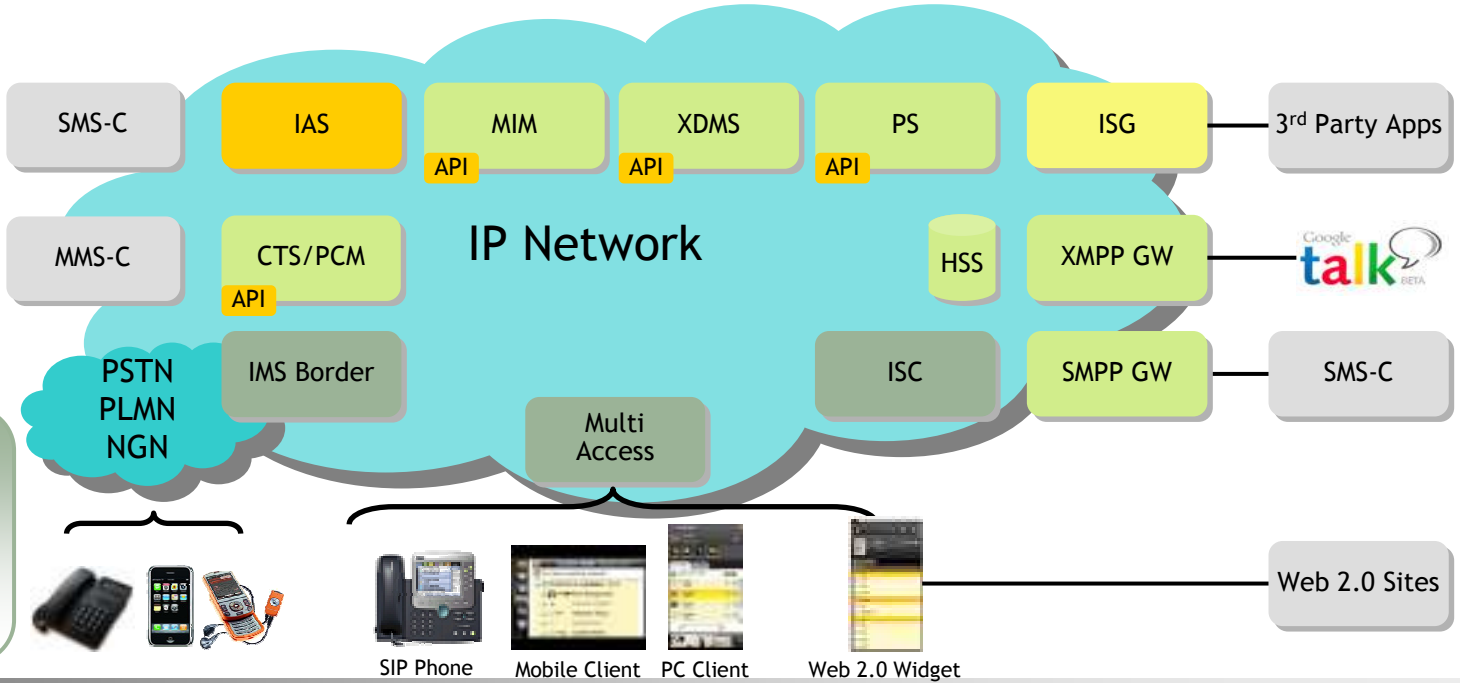
With XDMS, PS, MIM, CTS, PCM, HSS, XMPP GW, SMPP GW, mobile client, PC client and Web 2.0 widget, Tim can

- ☑ store his contacts in one place, synchronize contact information on all devices and see the status of his contacts
- ☑ use multimedia IM, SMS with his contacts in multiple communities as well as premium VoIP services over SIP phones
- ☑ communicate instantly on any devices and personalize his services instantly

Embracing Open Access (2)

With the IAS and APIs, Tim can

- ☑ stay close with his contacts over Web 2.0 sites using Web 2.0 widget interface similar to the interfaces of PC Client/Mobile Client
- ☑ enjoy more blended services created by service providers or Web 2.0 developers



Notes

- ☑ ISC, IMS Border and Multi Access should be implemented as part of "Taking Contacts Online" or "Enriching Communications"
- ☑ IMS Border and Multi Access are customized for different transport networks and access technologies

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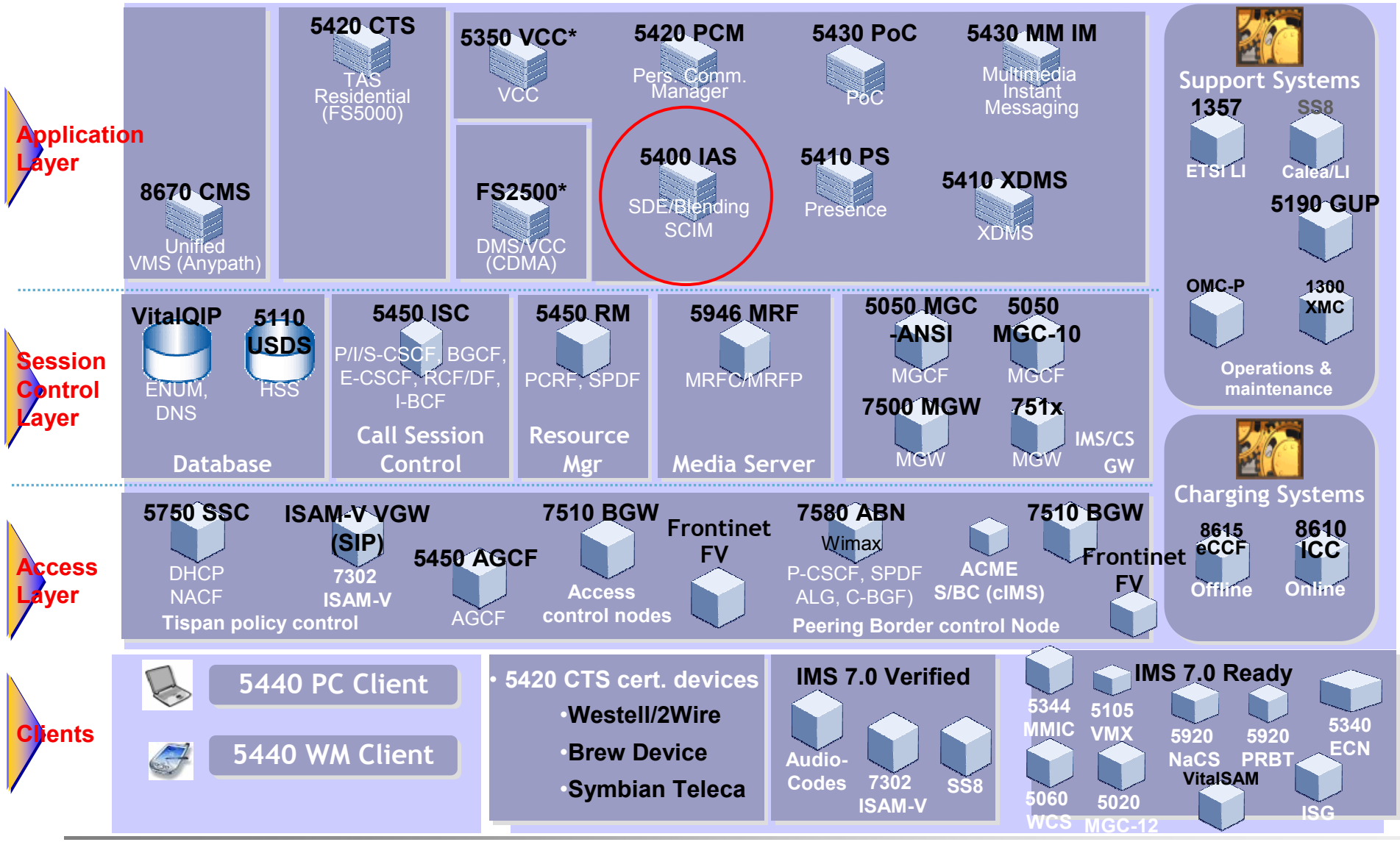
4 Addressing Internet Communications with Alcatel-Lucent's IMS Architecture

Alcatel-Lucent Internet Communications: IMS / Web2.0 Services Architecture



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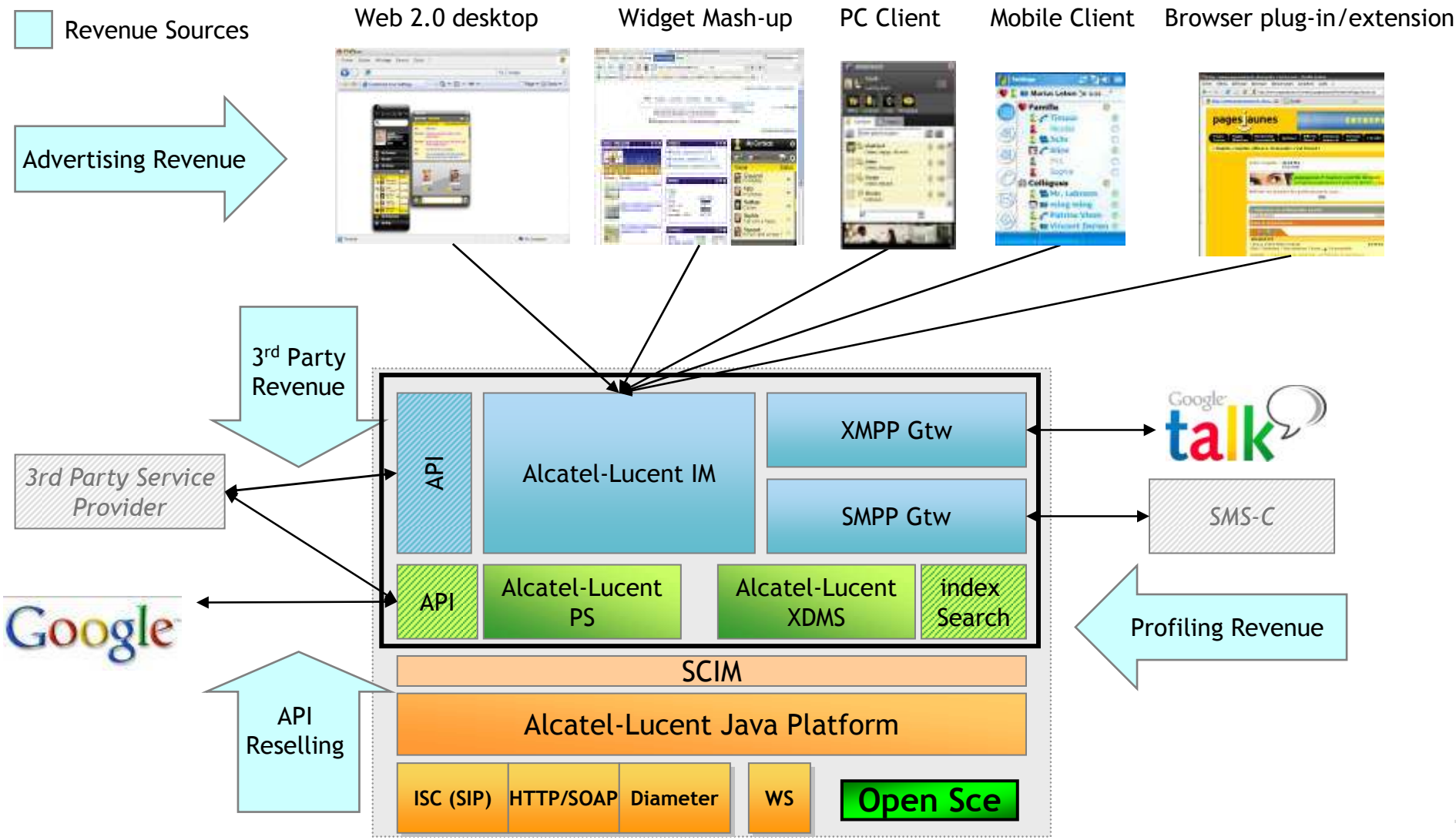
Alcatel-Lucent 54xx IMS / Web2.0 Application Server: the engine for evolution



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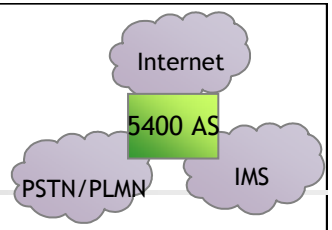
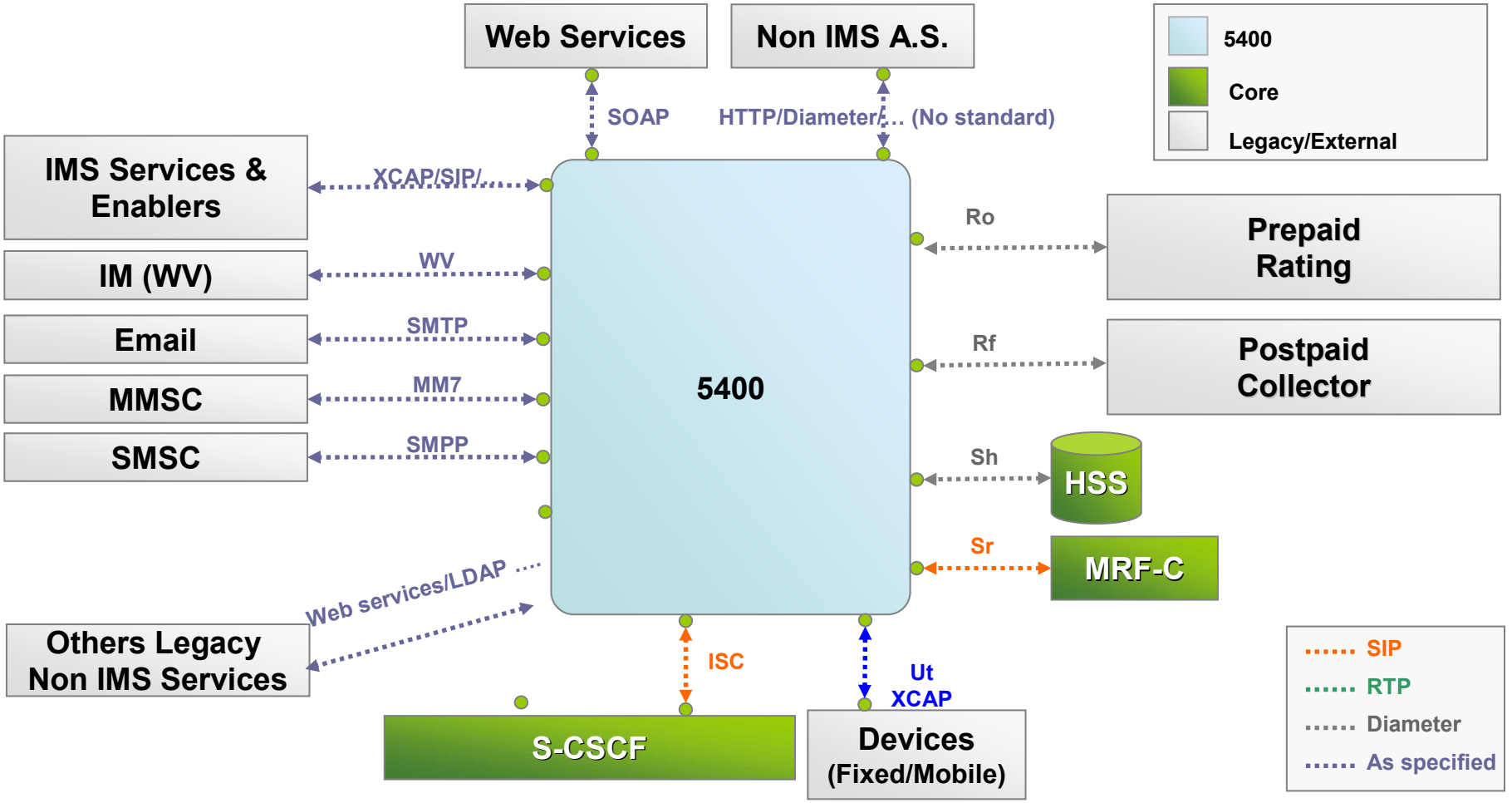
Alcatel-Lucent 5400 Application Server & it's environment

Integrate, communicate & leverage an existing network





5400 flexible architecture allowing integration with Telecoms and Internet domains

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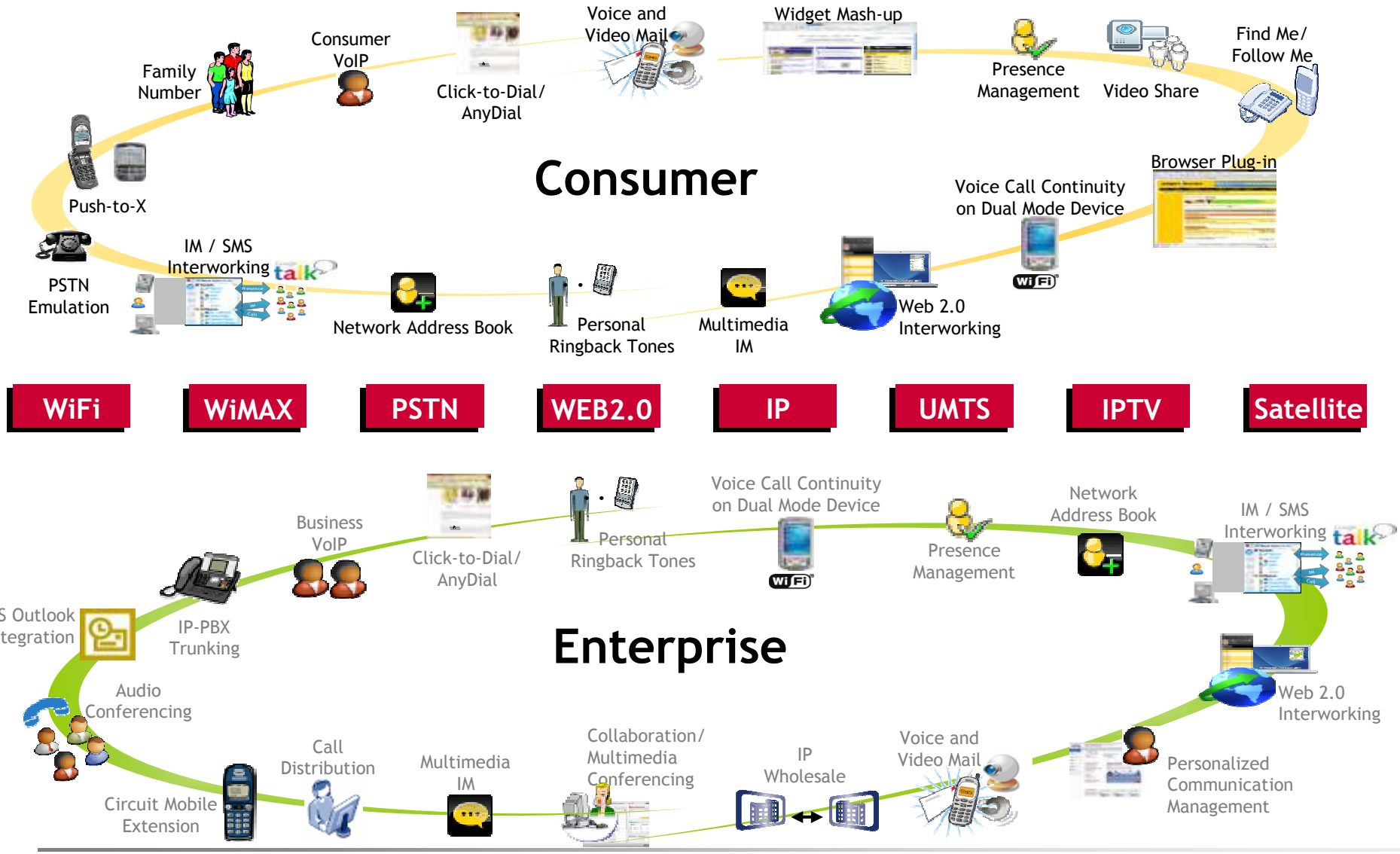
Alcatel-Lucent IMS: Complete Solutions For Your Customers



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THANK YOU